

**Amendments To The Drawings:**

None.

***Remarks***

This Amendment is in response to the Office Action dated **June 26, 2008**.

***Rejections***

***35 U.S.C. §112***

Claims 1-13 have been rejected under 35 U.S.C §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is asserted that “[t]he recitation of “a terpolymer of polyethylene....” is indefinite.”

Claim 1 has been amended to recite “terpolymer of ethylene” correctly referring to the monomer as suggested in the Office Action. Support can be found at least from paragraph [0046]. No new matter has been added.

It is further asserted in the Office Action that “[t]he recitation in claim 9 of the “phenolic metal deactivator” is indefinite. It is unclear as to what this chemical compound is intended to be and the metes and bounds of the claim are unclear.”

Applicants have amended claim 9 to recite “further comprising a metal deactivator, said metal deactivator comprises a phenolic compound”. Metal deactivators are employed for inhibiting the decomposition of the insulation material caused by copper ions, i.e. deactivation of the metal. See paragraph [0040]. No new matter has been added.

Applicants respectfully request withdrawal of the rejection of claims 1-13 under 35 U.S.C. §112, second paragraph.

Applicants have also amended the specification to reflect the amendment to claim 1 and in accordance with paragraph [0046]. No new matter has been added.

**Claims 1-13 §103(a) Harrell & Hall**

Claims 1-13 were rejected as being obvious over either Harrell et al, U.S. Patent 4,839,412 (Harrell '412) alone or in view of Hall, U.S. Patent 6,025,422 (Hall '422).

Claim 1 is directed to an insulation composition for halogen-free automotive cables, which includes a matrix resin, 50-200 parts by weight, based on 100 parts by weight of the matrix resin, of a metal hydroxide flame retardant, and 0.5-20 parts by weight of an antioxidant. The matrix resin consists of (1) 1-80 parts by weight of a polyethylene resin, (2) 1-80 parts by weight of an ethylene copolymer resin, and (3) 1-20 parts of a terpolymer of ethylene, acrylic ester and maleic anhydride.

Claim 1 was also amended to further recite that the terpolymer consists of 1 to 80 parts by weight of ethylene, 1 to 50 parts by weight of acrylic ester and 1 to 50 parts by weight of maleic anhydride. This recitation was found in claim 4 as filed which has been canceled. No new matter has been added.

Claims 2, 3 and 5-13 depend from claim 1.

Applicants submit that claims 1-13 are not obvious over Harrell in view of Hall.

It is asserted in the Office Action that:

The Harrell et al patent teaches compositions useful as flame retarding insulation for electrical wire coatings, see column 2 lines 14-18. These compositions incorporate polyethylene "(d)" which reads upon applicants claimed polyethylene resin. The ethylene polymer matrix "(a)" discussed in the patent reads upon the claimed ethylene copolymer resin ... The difference between this disclosure and the claimed invention is the incorporation of the claimed terpolymer having ethylene, an ester and maleic anhydride. The patent suggests the use of a copolymer of ethylene/vinyl acetate grafted with anhydride functionality, see column 1 lines 60-62. This is seen to fall within the scope of the claimed terpolymer. Given the suggestion of this species of polymer, one of ordinary skill would be motivated to select it from the list.

Harrell et al.'s composition includes (a) 20-100 parts of an ethylene polymer matrix comprising at least one thermoplastic *ethylene copolymer* of ethylene and at least one comonomer selected from vinyl acetate, esters and of methacrylic acid or esters of acrylic acid; (b) 10-80 parts of at least one *copolymer* selected from the class consisting of (i) an ethylene/propylene/diene copolymer grafted with 0.1 to 5 weight % anhydride functionality, (ii) at least one polyolefin grafted with 0.1 to 5 weight % anhydride functionality, or (iii) a mixture of both; (c) 75-130 parts per 100 parts of polymeric components present of magnesium hydroxide or aluminum trihydrate, or a mixture of both; and (d) 0-80 parts of *polyethylene*; provided that the combined parts of components (a) and (d) is at least 80 parts. See col. 1, lines 26-45 and claim 1.

Harrell et al. disclose that in addition to the polymers above, the composition may include a copolymer of ethylene and acrylic or methacrylic acid esters of saturated aliphatic alcohols grafted with anhydride functionality. This is an optional ingredient of the composition disclosed by Harrell et al. Therefore, Harrell et al. fails to motivate this polymer as a substitute for (a) or (b), but rather only suggests it in addition to (a) or (b) of their disclosed composition.

Furthermore, a graft polymer of the type disclosed by Harrell et al. is not a terpolymer as disclosed and claimed in the present application. Applicants' terpolymer includes ethylene, acrylic ester and maleic anhydride in the polymer backbone. For example, see paragraph [0046] discussing the random terpolymer.

The graft polymer disclosed by Harrell et al., on the other hand, is a copolymer of ethylene and acrylic or methacrylate acid esters of saturated aliphatic alcohols, grafted with anhydride functionality, the result of which is anhydride side chains which are not part of the polymer backbone, and thus a different polymer than that disclosed and claimed by Applicants.

Also, the amount of each monomer recited in claim 1, is not disclosed or suggested

by Harrell et al.

Hall was combined with Harrell et al. for the purpose of showing the claimed terpolymer as a polymeric coupling agent in cable insulating compositions based upon the claimed ethylene polymers and copolymers. It is asserted in the Office Action that “[g]iven the art recognized function of these terpolymers as coupling agents for ethylene polymers and copolymers one would be motivated to select this terpolymer and use it in the composition of Harrell given the benefits of coupling the ethylene polymers and copolymers.” Office Action, page 3, par. 8.

Applicants submit that Hall discloses flame retardant polymer compositions:

A composition that includes a hydrated inorganic filler and a polymer blend is disclosed. The polymer blend includes a polymerization or copolymerization product of one or more ethylenically unsaturated monomers. In addition, the polymer blend includes an aliphatic polyketone. The incorporation of aliphatic polyketone with polyethylene based polymers or copolymers results in dramatic improvements in both drip resistance and char strength; moreover, the composition of the present invention can use reduced amounts of hydrated inorganic filler relative to conventional polyethylene based compositions. This reduction in the amount of hydrated filler is expected to lead to improvements in physical properties and extrudability not otherwise possible. These properties make the compositions of the present invention particularly useful as an outer layer for electrical wires, optical fibers, or cables containing at least one wire, optical fiber, or both. Abstract

The coupling agent disclosed by Hall at column 6, lines 52-65, is also optional, and added in addition to the polymer blend of one or more polymerized or copolymerized ethylenically unsaturated monomers and the aliphatic polyketone (see, in particular, col. 6, lines 37-39 and lines 52-55).

Furthermore, while the coupling agent is broadly disclosed by Hall as being a terpolymer, and a list of monomers is recited, the only specific terpolymer disclosed is ethylene methyl acrylate acrylic acid terpolymer. See col. 6, lines 61-64. Therefore, Hall also lacks the

disclosure of the terpolymer being an ethylene/acrylic acid ester/maleic anhydride terpolymer having the specific amount of each monomer as recited in claim 1.

This combination fails not only to produce the claimed combination because the specific terpolymer is lacking, it also fails to motivate substitution of any terpolymer for any of the polymers or copolymers disclosed in the Harrell et al. (copolymers (a) and (b)) and Hall blends, but, at most, only to add them optionally, and in addition thereto.

No *prima facie* showing of obviousness has been established amended. The combination fails to produce a polymer blend of a homopolymer of ethylene, a copolymer of ethylene and a terpolymer of ethylene of the type recited in Applicants' claim. In order to establish *prima facie* obviousness, the references when combined, must teach or suggest all the claim limitations. See *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See also MPEP 2142.

Applicants have also shown that removing any of the homopolymer, copolymer or terpolymer from the claimed combination, decreases desirable property values in one manner or another. Please refer to Tables 1 and 2 on pages 13 and 16, and page 17, lines 4-15 of the present specification.

Applicants respectfully request withdrawal of the rejection of claims 1-13 under 35 U.S.C. §103(a) as being obvious over Harrell et al. in view of Hall.

**CONCLUSION**

Claims 1-3 and 5-13 are pending in the application. Applicants have addressed each of the issues presented in the Office Action. Based on the foregoing, Applicants respectfully request reconsideration and an early allowance of the claims as presented. Should any issues remain, the attorney of record may be reached at (952)563-3011, to expedite prosecution of this application.

Respectfully submitted,

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